Mark D Zelinka

List of Publications by Year
in descending order

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73 papers	7,314 citations	71102 41 h-index	85541 71 g-index
90 all docs	90 docs citations	90 times ranked	6050 citing authors

#	Article	IF	Citations
1	Causes of Higher Climate Sensitivity in CMIP6 Models. Geophysical Research Letters, 2020, 47, e2019GL085782.	4.0	759
2	An Assessment of Earth's Climate Sensitivity Using Multiple Lines of Evidence. Reviews of Geophysics, 2020, 58, e2019RG000678.	23.0	498
3	The DOE E3SM Coupled Model Version 1: Overview and Evaluation at Standard Resolution. Journal of Advances in Modeling Earth Systems, 2019, 11, 2089-2129.	3.8	404
4	Volcanic contribution to decadal changes in tropospheric temperature. Nature Geoscience, 2014, 7, 185-189.	12.9	364
5	Observational constraints on mixed-phase clouds imply higher climate sensitivity. Science, 2016, 352, 224-227.	12.6	331
6	Evaluating adjusted forcing and model spread for historical and future scenarios in the CMIP5 generation of climate models. Journal of Geophysical Research D: Atmospheres, 2013, 118, 1139-1150.	3.3	304
7	Evidence for climate change in the satellite cloud record. Nature, 2016, 536, 72-75.	27.8	264
8	Contributions of Different Cloud Types to Feedbacks and Rapid Adjustments in CMIP5*. Journal of Climate, 2013, 26, 5007-5027.	3.2	235
9	Why is longwave cloud feedback positive?. Journal of Geophysical Research, 2010, 115, .	3.3	223
10	Impact of decadal cloud variations on the Earthâ€™s energy budget. Nature Geoscience, 2016, 9, 871-874.	12.9	220
11	Computing and Partitioning Cloud Feedbacks Using Cloud Property Histograms. Part I: Cloud Radiative Kernels. Journal of Climate, 2012, 25, 3715-3735.	3.2	195
12	Are climate model simulations of clouds improving? An evaluation using the ISCCP simulator. Journal of Geophysical Research D: Atmospheres, 2013, 118, 1329-1342.	3.3	195
13	Computing and Partitioning Cloud Feedbacks Using Cloud Property Histograms. Part II: Attribution to Changes in Cloud Amount, Altitude, and Optical Depth. Journal of Climate, 2012, 25, 3736-3754.	3.2	192
14	Cloud feedback mechanisms and their representation in global climate models. Wiley Interdisciplinary Reviews: Climate Change, 2017, 8, e465.	8.1	154
15	Climate simulations: recognize the â€˜hot modelâ€™ problem. Nature, 2022, 605, 26-29.	27.8	141
16	Quantifying components of aerosol-cloud-radiation interactions in climate models. Journal of Geophysical Research D: Atmospheres, 2014, 119, 7599-7615.	3.3	138
17	Insights from a refined decomposition of cloud feedbacks. Geophysical Research Letters, 2016, 43, 9259-9269.	4.0	134
18	Climate Feedbacks and Their Implications for Poleward Energy Flux Changes in a Warming Climate. Journal of Climate, 2012, 25, 608-624.	3.2	128

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19	Mixedâ€phase cloud physics and Southern Ocean cloud feedback in climate models. Journal of Geophysical Research D: Atmospheres, 2015, 120, 9539-9554.	3.3	120
20	On the relationships among cloud cover, mixedâ€phase partitioning, and planetary albedo in GCMs. Journal of Advances in Modeling Earth Systems, 2016, 8, 650-668.	3.8	120
21	An observational radiative constraint on hydrologic cycle intensification. Nature, 2015, 528, 249-253.	27.8	119
22	Statistical significance of climate sensitivity predictors obtained by data mining. Geophysical Research Letters, 2014, 41, 1803-1808.	4.0	109
23	Analyzing the dependence of global cloud feedback on the spatial pattern of sea surface temperature change with a <scp>G</scp>reen's function approach. Journal of Advances in Modeling Earth Systems, 2017, 9, 2174-2189.	3.8	103
24	Human influence on the seasonal cycle of tropospheric temperature. Science, 2018, 361, .	12.6	103
25	Positive low cloud and dust feedbacks amplify tropical North Atlantic Multidecadal Oscillation. Geophysical Research Letters, 2016, 43, 1349-1356.	4.0	99
26	The response of the Southern Hemispheric eddy-driven jet to future changes in shortwave radiation in CMIP5. Geophysical Research Letters, 2014, 41, 3244-3250.	4.0	98
27	Quantifying the Sources of Intermodel Spread in Equilibrium Climate Sensitivity. Journal of Climate, 2016, 29, 513-524.	3.2	98
28	Clearing clouds of uncertainty. Nature Climate Change, 2017, 7, 674-678.	18.8	87
29	The observed sensitivity of high clouds to mean surface temperature anomalies in the tropics. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	85
30	Intermodel Spread in the Pattern Effect and Its Contribution to Climate Sensitivity in CMIP5 and CMIP6 Models. Journal of Climate, 2020, 33, 7755-7775.	3.2	77
31	Evaluating Emergent Constraints on Equilibrium Climate Sensitivity. Journal of Climate, 2018, 31, 3921-3942.	3.2	74
32	Observational constraints on low cloud feedback reduce uncertainty of climate sensitivity. Nature Climate Change, 2021, 11, 501-507.	18.8	74
33	The relationship between interannual and longâ€term cloud feedbacks. Geophysical Research Letters, 2015, 42, 10,463.	4.0	73
34	The ozone hole indirect effect: Cloudâ€radiative anomalies accompanying the poleward shift of the eddyâ€driven jet in the Southern Hemisphere. Geophysical Research Letters, 2013, 40, 3688-3692.	4.0	58
35	Constraining the lowâ€cloud optical depth feedback at middle and high latitudes using satellite observations. Journal of Geophysical Research D: Atmospheres, 2016, 121, 9696-9716.	3.3	57
36	Evaluation of Clouds in Version 1 of the E3SM Atmosphere Model With Satellite Simulators. Journal of Advances in Modeling Earth Systems, 2019, 11, 1253-1268.	3.8	55

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37	Contributions to Polar Amplification in CMIP5 and CMIP6 Models. Frontiers in Earth Science, 2021, 9, .	1.8	55
38	An Analysis of the Short-Term Cloud Feedback Using MODIS Data. Journal of Climate, 2013, 26, 4803-4815.	3.2	51
39	An underestimated negative cloud feedback from cloud lifetime changes. Nature Climate Change, 2021, 11, 508-513.	18.8	51
40	Observed multivariable signals of late 20th and early 21st century volcanic activity. Geophysical Research Letters, 2015, 42, 500-509.	4.0	50
41	Response of Humidity and Clouds to Tropical Deep Convection. Journal of Climate, 2009, 22, 2389-2404.	3.2	49
42	Cirrus feedback on interannual climate fluctuations. Geophysical Research Letters, 2014, 41, 9166-9173.	4.0	47
43	Observed Sensitivity of Low-Cloud Radiative Effects to Meteorological Perturbations over the Global Oceans. Journal of Climate, 2020, 33, 7717-7734.	3.2	41
44	External Influences on Modeled and Observed Cloud Trends. Journal of Climate, 2015, 28, 4820-4840.	3.2	37
45	Sources of Intermodel Spread in the Lapse Rate and Water Vapor Feedbacks. Journal of Climate, 2018, 31, 3187-3206.	3.2	35
46	Greater committed warming after accounting for the pattern effect. Nature Climate Change, 2021, 11, 132-136.	18.8	35
47	Celebrating the anniversary of three key events in climate change science. Nature Climate Change, 2019, 9, 180-182.	18.8	34
48	Quantifying stochastic uncertainty in detection time of human-caused climate signals. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 19821-19827.	7.1	32
49	Natural variability contributes to modelâ€"satellite differences in tropical tropospheric warming. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	27
50	Responses of the Hadley Circulation to Regional Sea Surface Temperature Changes. Journal of Climate, 2020, 33, 429-441.	3.2	24
51	Evaluating Climate Modelsâ€™ Cloud Feedbacks Against Expert Judgment. Journal of Geophysical Research D: Atmospheres, 2022, 127, e2021JD035198.	3.3	24
52	Competing Influences of Anthropogenic Warming, ENSO, and Plant Physiology on Future Terrestrial Aridity. Journal of Climate, 2017, 30, 6883-6904.	3.2	20
53	Drivers of the Low-Cloud Response to Poleward Jet Shifts in the North Pacific in Observations and Models. Journal of Climate, 2018, 31, 7925-7947.	3.2	20
54	Ten new insights in climate science 2020 â€" a horizon scan. Global Sustainability, 2021, 4, .	3.3	17

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55	Better calibration of cloud parameterizations and subgrid effects increases the fidelity of the E3SM Atmosphere Model version 1. Geoscientific Model Development, 2022, 15, 2881-2916.	3.6	17
56	The Cloud Feedback Model Intercomparison Project (CFMIP) Diagnostic Codes Catalogue â€“ metrics, diagnostics and methodologies to evaluate, understand and improve the representation of clouds and cloud feedbacks in climate models. Geoscientific Model Development, 2017, 10, 4285-4305.	3.6	16
57	Mechanisms Behind the Extratropical Stratiform Lowâ€Cloud Optical Depth Response to Temperature in ARM Site Observations. Journal of Geophysical Research D: Atmospheres, 2019, 124, 2127-2147.	3.3	16
58	Climatology Explains Intermodel Spread in Tropical Upper Tropospheric Cloud and Relative Humidity Response to Greenhouse Warming. Geophysical Research Letters, 2019, 46, 13399-13409.	4.0	15
59	Volcanic effects on climate. Nature Climate Change, 2016, 6, 3-4.	18.8	14
60	Cloud feedbacks in extratropical cyclones: insight from long-term satellite data and high-resolution global simulations. Atmospheric Chemistry and Physics, 2019, 19, 1147-1172.	4.9	12
61	A Regime-Oriented Approach to Observationally Constraining Extratropical Shortwave Cloud Feedbacks. Journal of Climate, 2020, 33, 9967-9983.	3.2	12
62	On the Emergent Constraints of Climate Sensitivity. Journal of Climate, 2018, 31, 863-875.	3.2	11
63	Assessing Prior Emergent Constraints on Surface Albedo Feedback in CMIP6. Journal of Climate, 2021, 34, 3889-3905.	3.2	11
64	On the Correspondence Between Atmosphereâ€Only and Coupled Simulations for Radiative Feedbacks and Forcing From CO₂. Journal of Geophysical Research D: Atmospheres, 2022, 127, .	3.3	10
65	A multi-year short-range hindcast experiment with CESM1 for evaluating climate model moist processes from diurnal to interannual timescales. Geoscientific Model Development, 2021, 14, 73-90.	3.6	9
66	Extratropical Shortwave Cloud Feedbacks in the Context of the Global Circulation and Hydrological Cycle. Geophysical Research Letters, 2022, 49, .	4.0	8
67	Mixed-Phase Cloud Feedbacks. , 2018, , 215-236.		7
68	Earlier emergence of a temperature response to mitigation by filtering annual variability. Nature Communications, 2022, 13, 1578.	12.8	4
69	Diagnosing the average spatio-temporal impact of convective systems â€“ Part 2: A model intercomparison using satellite data. Atmospheric Chemistry and Physics, 2014, 14, 8701-8721.	4.9	3
70	Distinct Patterns of Cloud Changes Associated with Decadal Variability and Their Contribution to Observed Cloud Cover Trends. Journal of Climate, 2019, 32, 7281-7301.	3.2	3
71	Diagnosing the average spatio-temporal impact of convective systems â€“ Part 1: A methodology for evaluating climate models. Atmospheric Chemistry and Physics, 2013, 13, 12043-12058.	4.9	2
72	The Climatic Impact of Thermodynamic Phase Partitioning in Mixed-Phase Clouds. , 2018, , 237-264.		1

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73	Evaluating Cloud Feedbacks and Rapid Responses in the ACCESS Model. Journal of Geophysical Research D: Atmospheres, 2019, 124, 350-366.	3.3	1